

**On a Species of *Simulium* (*Ectemnaspis*) from the
Northeastern United States (Diptera)**

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THE AMERICAN MUSEUM OF NATURAL HISTORY, NEW YORK

RECEIVED FOR PUBLICATION SEPTEMBER 7, 1972

Abstract: The capture of two females of a black fly species of the subgenus *Simulium* (*Ectemnaspis*) in the foothills of the Catskill Mountains, in Ulster County, New York, is reported. The females are indistinguishable, in color and structural characters, from *bicoloratum*, the type of *Simulium* (*Ectemnaspis*), and two very closely related species. The subgenus has previously only been reported from South America.

DISCUSSION

On one day early in July of 1971, two female specimens of a black fly species indistinguishable from species of the *Simulium* (*Ectemnaspis*) *bicoloratum* complex, an endemic South American group, were collected in the eastern foothills of the Catskill Mountains of New York. Had the author found these specimens in a collection labeled as from the Catskills, he would have shrugged it off as a rather regrettable error in labeling, and would not have pursued the matter any further. As it happens, it was the author himself who collected the Catskill specimens, by means of a Malaise trap run routinely for a general survey of diurnal flying insects on woodlands northwest of Kerhonkson, Ulster County. These black flies were among a large number of miscellaneous insects contained in one of the two collecting jars of the Malaise trap. The specimens were fresh when found, brightly colored, with normal turgidity of the abdomen, and with flexible appendages. There is thus no chance of doubt about their provenance. The trap had been used for at least two weeks before the specimens were found, and although many other black flies had been encountered in the trap before and also later, the *Ectemnaspis* were found only once. None were observed biting man, although other species were.

During the spring and early summer of 1972, a concentrated search for additional specimens of *Ectemnaspis* was carried out in the area where the specimens had been found. A Malaise trap was run again in the original location, and many streams were explored for the aquatic stages of the species, all with negative results, even though many other black fly species were obtained. Stream collecting, however, was severely hampered during late June and early July (the period when pupae of the enigmatic species would most likely be found) because of extremely heavy rains, with flooding especially of the larger, permanent streams which frequently became torrential.

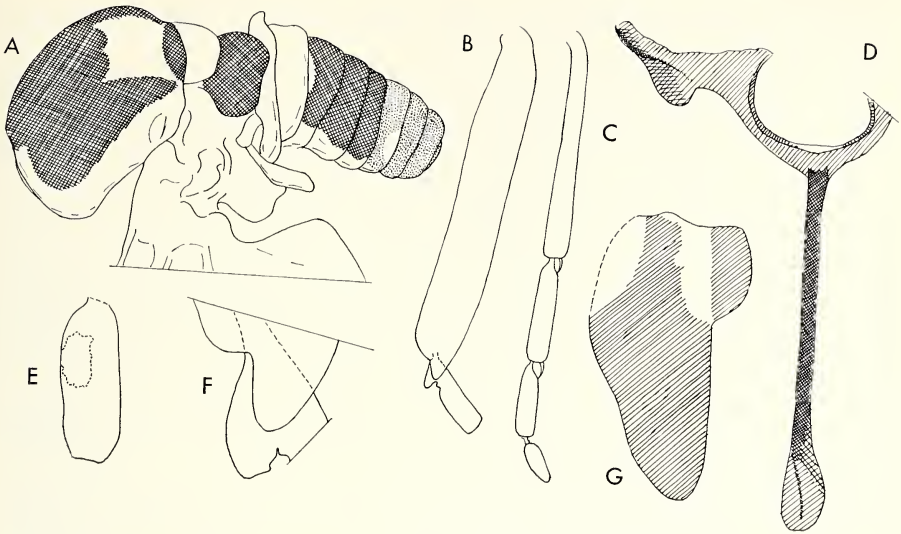


FIG. 1. *Simulium (Ectemnaspis)* sp., from Ulster County, New York, female. A. Thorax and abdomen with color pattern, dorsolateral view. B. Fore tarsus, first to fourth tarsomeres. C. Hind basitarsus with second tarsomere. D. Portion of genital fork. E. Second segment of maxillary palp, with outlines of sensory vesicle. F. Calcipala and pedisulcus. G. Cercus and paraproct.

Considering the unusual nature of this find I thought it advisable to publish the available data so as to stimulate others interested in black fly study to make a special search for this species.

The subgenus *Simulium (Ectemnaspis)* Enderlein, 1934, has as its type the South American species *Simulium bicoloratum* Malloch, 1913. This species was recently redescribed in great detail (Wygodzinsky, 1971) from abundant material of larvae, pupae, and adults of both sexes. The species occurs along the Andean chain, at elevations from 2000 to 3600 meters, with its range extending from Bolivia to Venezuela. Wygodzinsky (loc. cit.) also described two closely related species, *cornonsi* and *jaimeramirezi*, sympatric with *bicoloratum* although restricted to the Andes of Mérida, in Venezuela. The adults of these three species are very similar and are difficult or impossible to separate, but the pupae are clearly distinct. The highly apomorphic species forming this complex are connected by other species which share some but not all of the complex's characters to superficially quite dissimilar, comparatively plesiomorphic species such as *Simulium perflavum* Roubaud, 1906. Once the much needed subgeneric revision of neotropical *Simulium* is carried out, the species discussed above will probably all be formally included in *Ectemnaspis*. The subgenus is restricted to South America, with a possible center of diversity in northern South America. *S. (Ectemnaspis)*, or any species that could be considered as belonging to the

subgenus, has never been reported from Central America, Mexico, the United States, or Canada.

I am unable to distinguish the New York material from the females of the *Simulium* (*Ectemnaspis*) *bicoloratum* complex. The importance of a slight difference in the shape of the paraproct (Fig. 1G) as compared to that of the South American species is uncertain, and may well fall within the range of individual variation. The true identity of the species will only be established after the male, pupa and larva, become known. In order to facilitate recognition and comparison of the New York form, a few of its morphological characters and its color pattern (black and yellow) are illustrated here (Fig. 1). Figures illustrating the features of the Andean species to which reference has been made above are found in Wygodzinsky (1971).

MATERIAL EXAMINED: U.S.A.: New York, Ulster County, Cherrytown, southwest of Kerhonkson, July 1-15, 1971, P. and B. Wygodzinsky col. (2 females, in the American Museum of Natural History).

I assume that the two females captured belong to an established population because simultaneous wide-distance dispersal of two specimens from some unknown South American location to the Catskills where the trap was located is an unacceptable hypothesis. Speculations about the age and history of this population are not advisable until additional material comes to hand, and especially until the specific status of the population can be determined.

Literature Cited

- WYGDZINSKY, P. 1971. Descriptions and redescriptions of species of the blackfly genus *Simulium* from the northern Andes (Simuliidae, Diptera). American Mus. Novitates, **2447**: 1-38.